

FIG. 1 is a schematic diagram of a circuit for measuring the voltage across a load resistor. The circuit includes a voltage source V_H , a switch S_1 , a load resistor R_L , a sense resistor R_s , two operational amplifiers A_1 and A_2 , an ADC, and a microprocessor μP . The voltage source V_H is connected to the load resistor R_L and the sense resistor R_s in series. The switch S_1 is connected to the voltage source V_H and the load resistor R_L . The load resistor R_L is connected to the sense resistor R_s . The sense resistor R_s is connected to the ground. The voltage across the load resistor R_L is V_L and the voltage across the sense resistor R_s is V_s . The operational amplifier A_1 is connected to the load resistor R_L and the ground. The operational amplifier A_2 is connected to the sense resistor R_s and the ground. The outputs of the operational amplifiers A_1 and A_2 are V_1 and V_2 respectively. The ADC is connected to the outputs V_1 and V_2 . The microprocessor μP is connected to the ADC.

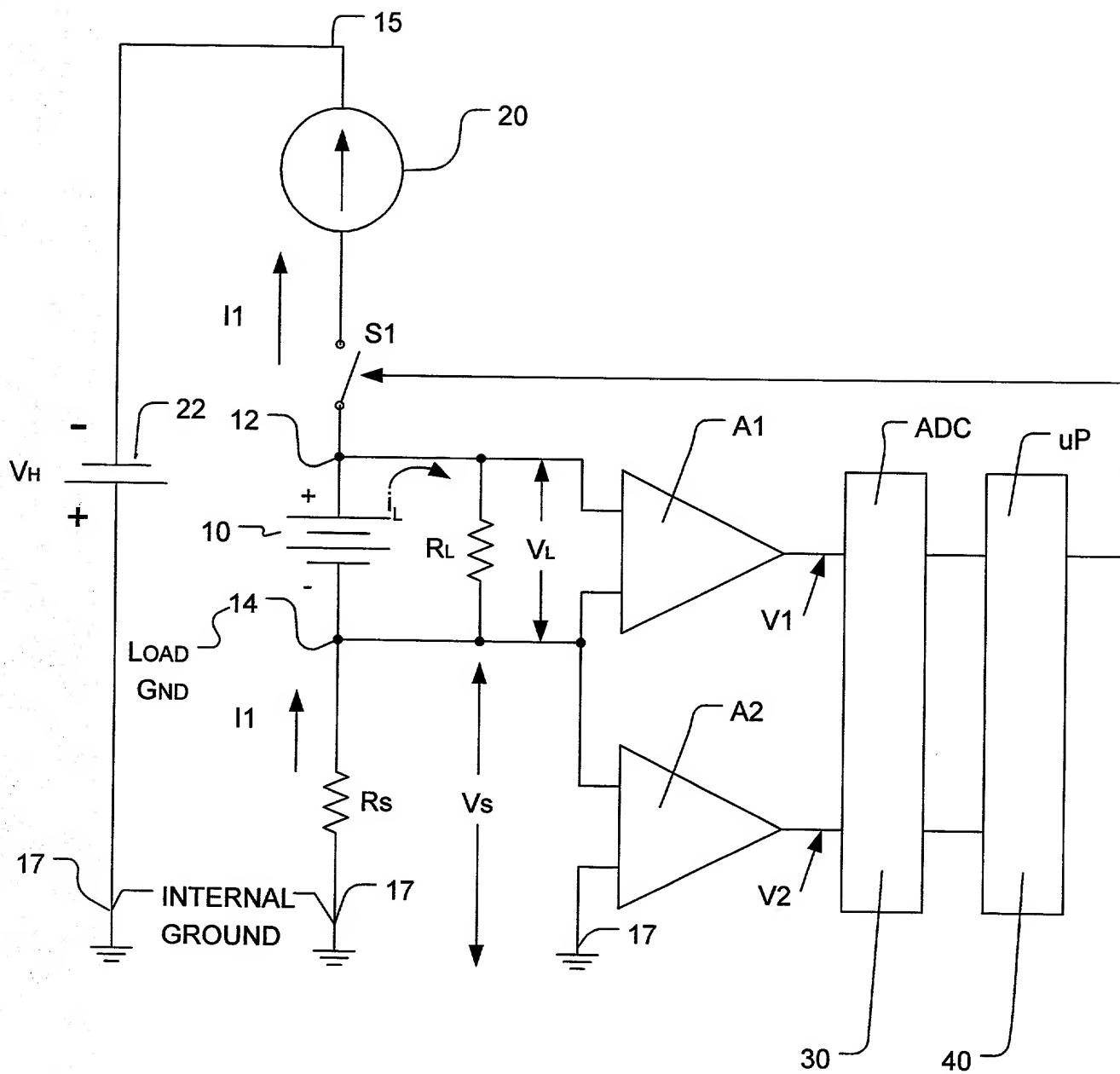


FIG 1

FIG. 1A is a schematic diagram of a DC bus system. The system includes a DC BUS (14) connected to a BATTERY (10) and a BATTERY CHARGER (12). The BATTERY (10) is connected to the DC BUS (14) via a switch (16). The BATTERY CHARGER (12) is connected to the DC BUS (14) via a switch (18). The DC BUS (14) is connected to a BREAKER COIL (16), a PROTECTIVE RELAYS (18), a TRANSDUCER (20), and an RTU (22). The RTU (22) is connected to an ALARM SIGNAL (24). The ALARM SIGNAL (24) is connected to the BATTERY CHARGER (12) and the BATTERY (10).

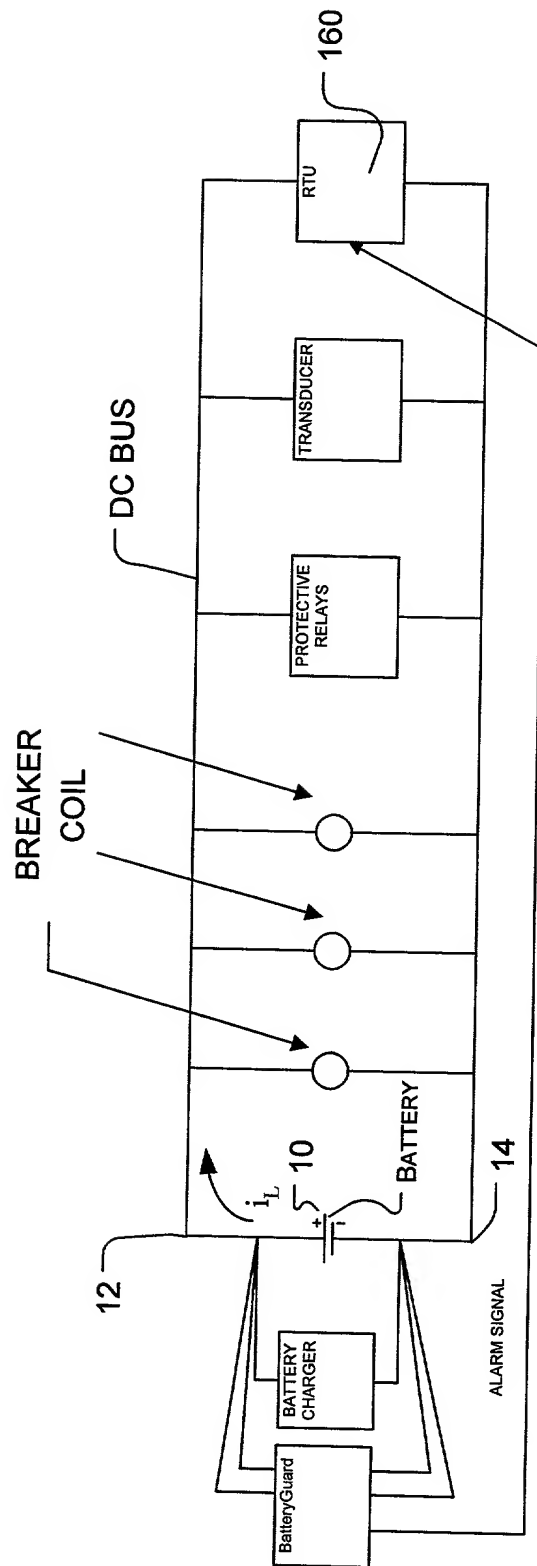


FIG 1A

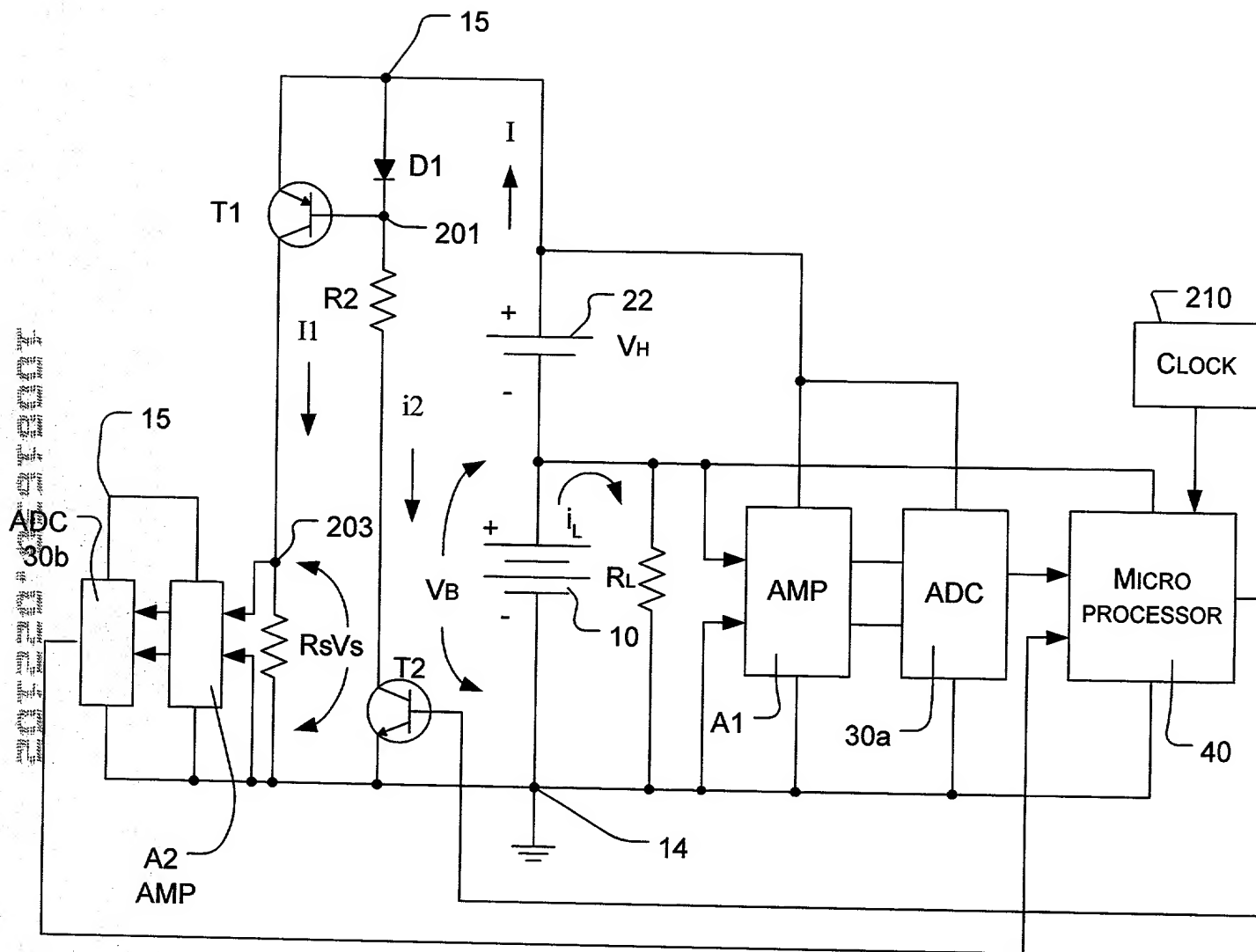


FIG 2

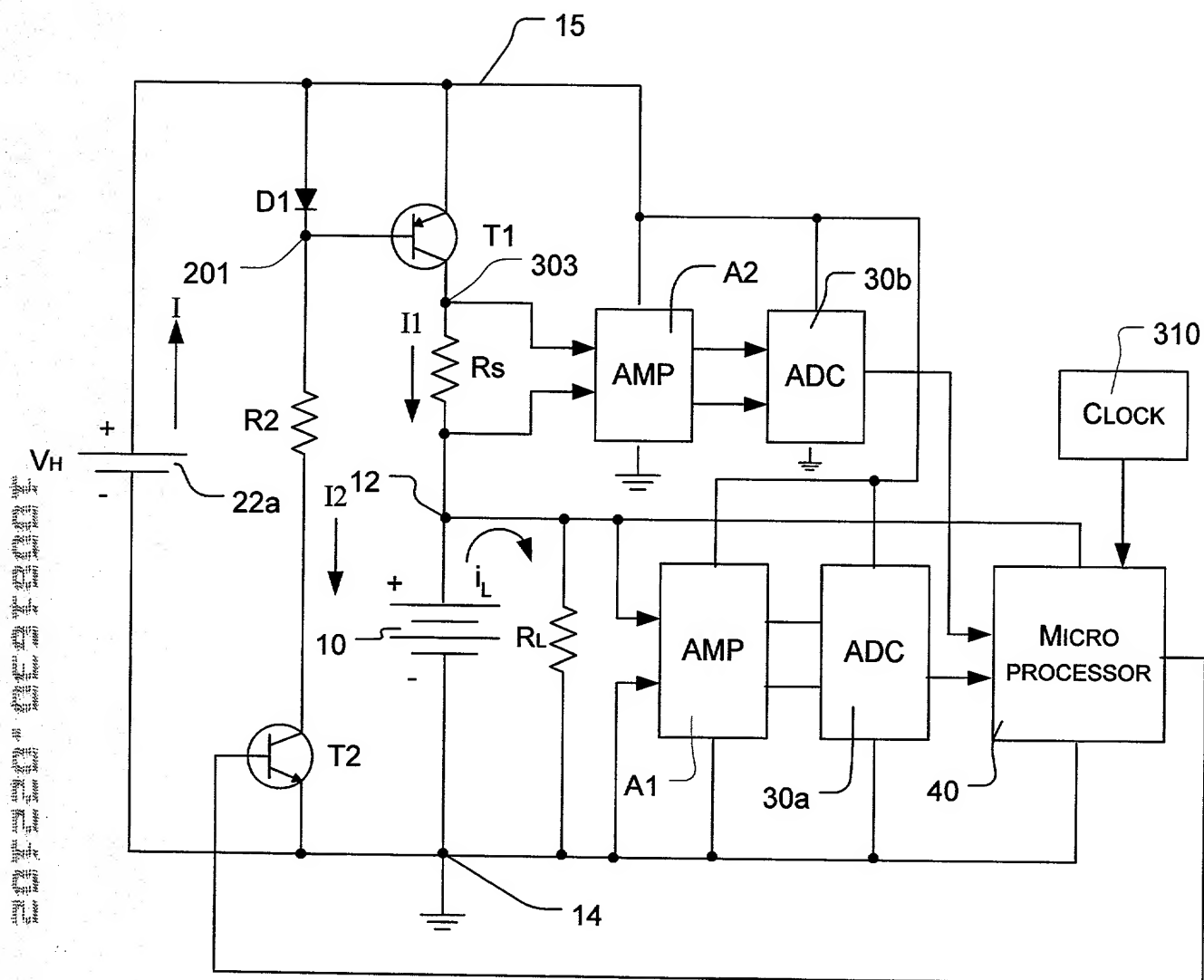


FIG 3

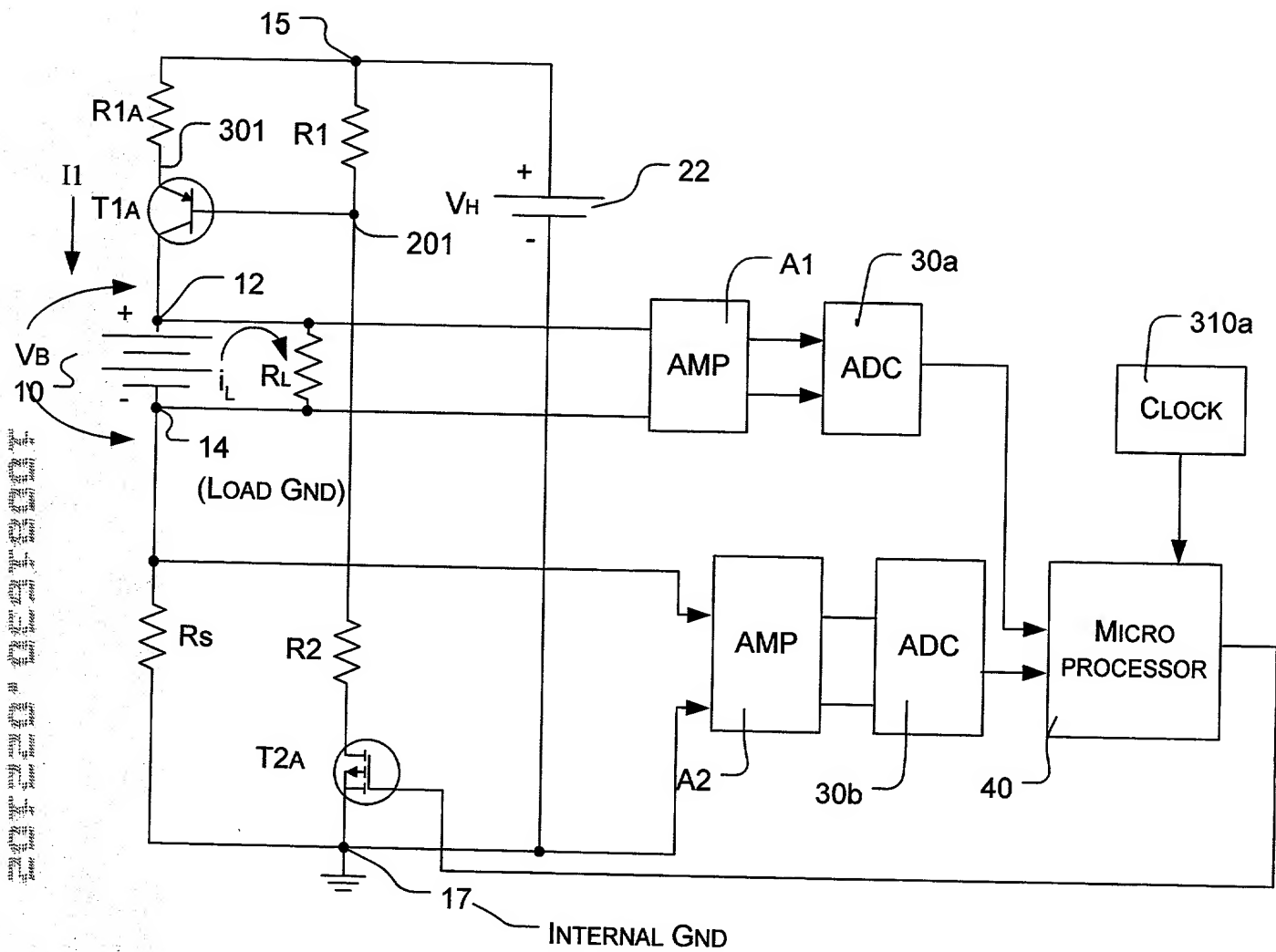


FIG 3A

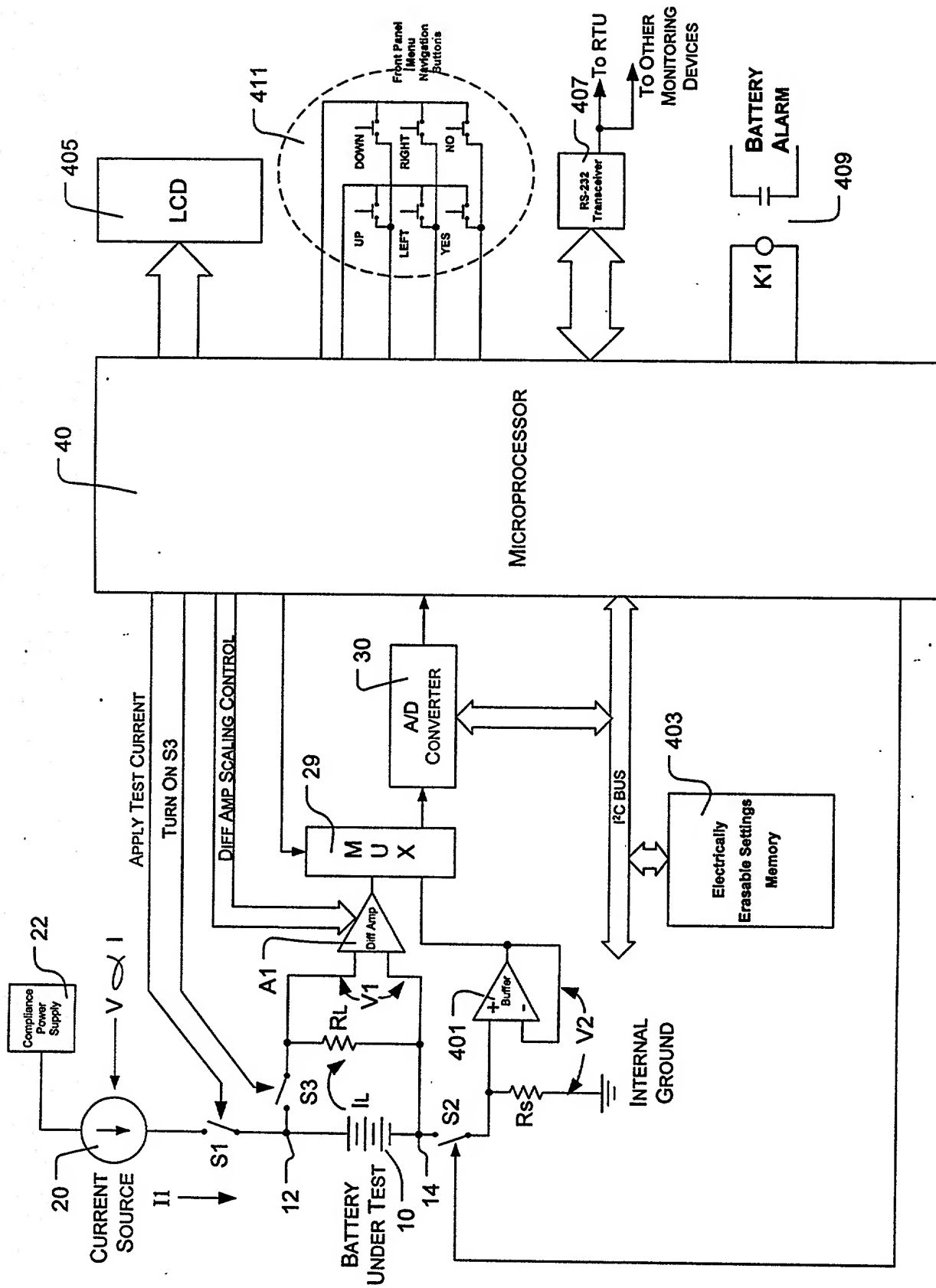


FIG 4

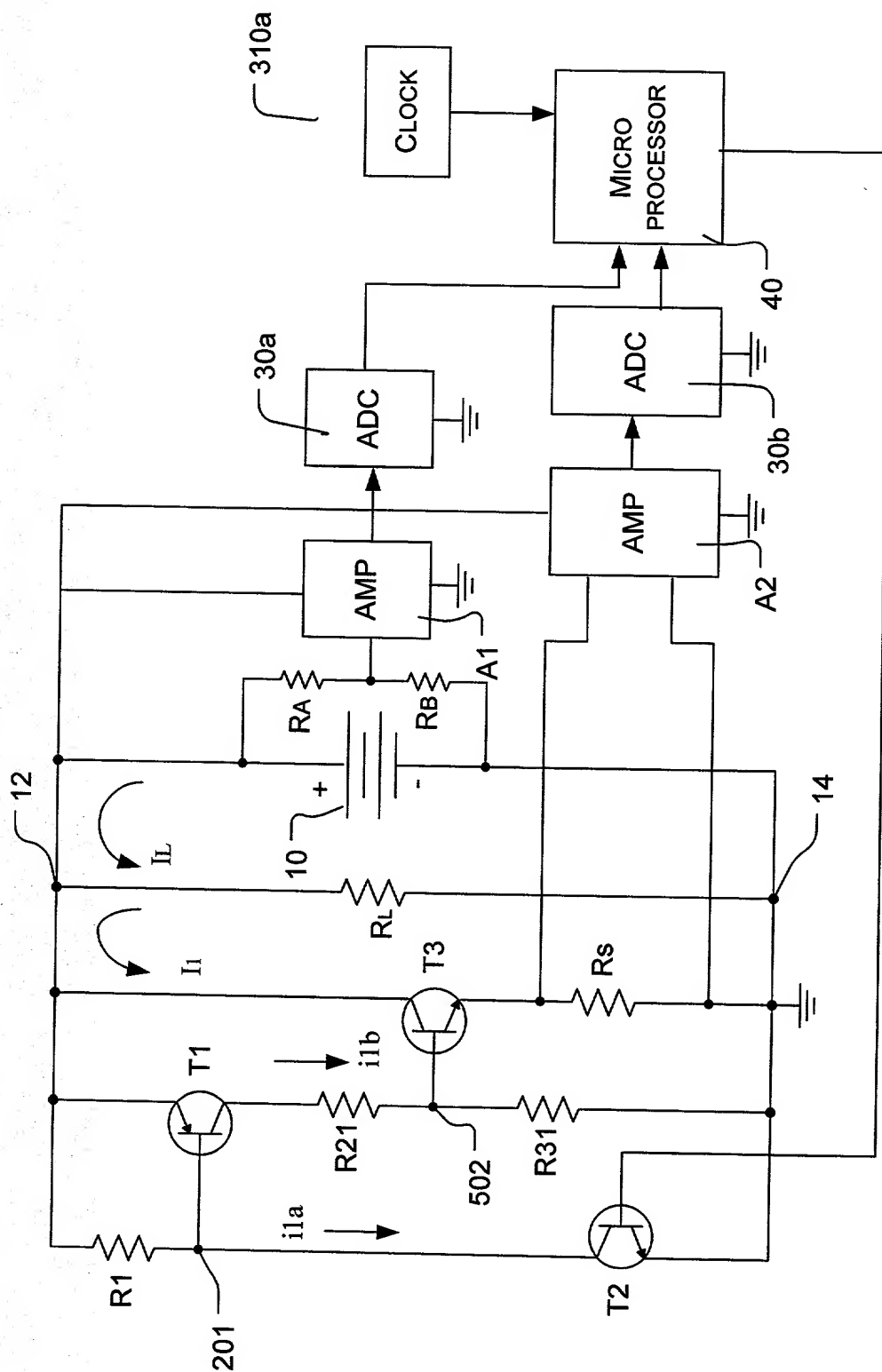


FIG 5